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**From:** Kier, Lori [Kier.Lori@epa.gov]  
**Sent:** 2/5/2016 9:35:53 PM  
**To:** Jamieson, Cheryl [Jamieson.Cheryl@epa.gov]; Reinhart, Roger [Reinhart.Roger@epa.gov]  
**Subject:** Fw: Region 5 and Region 3 Updates on Numbers of Public and Private wells impacted by PFOS and PFOA

Forwarding because I did not see you cc'd.

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*Lori Kier*

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**From:** Shoven, Heather  
**Sent:** Friday, February 5, 2016 4:30 PM  
**To:** Hyde, Tinka; Poy, Thomas  
**Cc:** Kier, Lori; Clark, Jacqueline; Reinhart, Roger; Field, Stephen; Donahue, Lisa; Johnson, KarenD; Capacasa, Jon; rogers, rick; King, Carol; Thurmon, Clarke; Harris, Kimberly  
**Subject:** Region 5 and Region 3 Updates on Numbers of Public and Private wells impacted by PFOS and PFOA

Hi Tinka and Tom (as well as colleagues and management in Region 3),

I wanted to make sure that you were aware of the latest PFOS/PFOA data from Region 3 (see Karen Johnson's email below) and also provide you with an update on PFOS and PFOA detects within Region 5.

- Provisional Health Advisory Level for PFOA = 0.40 ppb → Lifetime Health Advisory Level may be 100 ppt
- Provisional Health Advisory Level for PFOS = 0.20 ppb → Lifetime Health Advisory Level may be 100 ppt

We have analyzed the following data in preparation for discussions next week in light of the forthcoming release of lifetime health advisory levels for PFOA and PFOS by OW:

1. **UCMR 3 Data** pulled as of October 2015 covering monitoring that occurred between 1/1/2013 and 9/30/2015.  
NOTE: The UCMR 3 required all large systems (serving larger than 10,000 people) and a subset of systems serving less than 10,000 people to monitor for both PFOA and PFOS, along with other contaminants) at the entry point to the distribution system (post treatment=finished water).
2. **2009 DuPont Order Private Well Data** (Ohio only, Progress Report #37 dated 12/21/2015)
3. **2009 DuPont Order Public Water System Data** (Ohio only, Progress Report #37 dated 12/21/2015)

The shift from the provisional health advisory levels to a 100 ppt lifetime health advisory level for each contaminant triggers the need for action based on both UCMR 3 and DuPont data. I have summarized each data set to give you an idea of the number of wells affected by a change in the advisory level.

**(1) UCMR 3 Data**

**PFOA:** There were no PWSs above the draft PFOA trigger level of 100 ppt in this dataset. Those 11 PWSs within Region 5 with PFOA detections had concentrations ranging between 20-90 ppt (the high end results were from Oakdale, MN).

**PFOS:** Both Oakdale (MN1820016) and Wright-Patterson AFB Area A/C (OH2903412) have UCMR 3 results that **exceed the provisional health advisory level of 0.20 ppb**. Oakdale has results at 0.439 ppb and 0.435 ppb in 2015 and Wright Patterson has a result of 0.21 ppb.

- **Oakdale:** Back in early 2000's, most of Oakdale's wells were contaminated with PFCs (including PFOA, PFOS, PFBA, PFHxA, and more). Among other things, 3M agreed to pay for centralized treatment (GAC plants) to remove most PFCs (not down to zero or trace levels but below state & federal guidelines). 3M also provided bottled water, filters, and free city hook-ups to private well owners, MDH initiated a biomonitor program, ATSDR conducted a health assessment, and MPCA lead remediation efforts.
- **Wright-Patterson AFB Area A/C:** This Federal Superfund Site has a long history of contamination issues (including perchlorate). David Seely is the R5 lead.
- **Three PWSs have PFOS levels above the lifetime level of 100 ppt and but below the current provisional level of 0.20 ppb.** They are Freeport, IL (0.18 ppb), Bemidji, MN (0.133 ppb) and LaCrosse, WI (0.14 ppb). We have not followed up with the states on the status of these systems since they are below the current provisional health advisory level.

**(2) 2009 DuPont Order Private Well Data (Ohio and PFOA only)**

**PFOA:** If the PFOA value is 100 ppt, an additional 15 homes in Ohio (and 5 homes in WV) will require alternate water and treatment. These homes have levels below the current provisional health advisory level of 0.40 ppb.

**(3) 2009 DuPont Order Public Water System Data (Ohio and PFOA only)**

**PFOA:** There are four PWSs in Ohio that are sampled as part of the 2009 Order. Belpre Public Works has November 2015 data for PFOA above 100 ppt in the finished water. The other three PWSs have levels well below 100 ppt after treatment.

**Ex. 5 Deliberative Process (DP)**

Thanks to Kim Harris

for help with the UCMR 3 data and to Region 3 for the DuPont Order private well data.

Best wishes,  
Heather

Heather A. Shoven | Enforcement Team Leader | U.S. Environmental Protection Agency, Region 5  
Ground Water and Drinking Water Branch | 77 W. Jackson Blvd (WG-15J) | Chicago, IL 60604 | 312-886-0153

**From:** Johnson, KarenD

**Sent:** Friday, February 05, 2016 1:18 PM

**To:** Capacasa, Jon <Capacasa.jon@epa.gov>; rogers, rick <rogers.rick@epa.gov>

**Cc:** Shoven, Heather <shoven.heather@epa.gov>; Kier, Lori <Kier.Lori@epa.gov>; Clark, Jacqueline <clark.jacqueline@epa.gov>; Reinhart, Roger <Reinhart.Roger@epa.gov>; Field, Stephen <Field.Stephen@epa.gov>; Donahue, Lisa <Donahue.Lisa@epa.gov>

**Subject:** RE: Update on numbers of Public and Private wells impacted by PFOS and PFOA

Updated with some clarifications for Shawn's benefit

## Ex. 5 Deliberative Process (DP)

During the call on February 3, we agreed to update you all on the number of wells currently impacted by PFC's that we are working with.

Delaware- PFOS – Two Artesian systems identified in the UCMR sampling with PFOS above 0.2 ppb wells turned off. These systems also have PFOA above 100 ppt.

- All three additional wells for the New Castle system are off line and purchasing water due to PFOS above .2. this system serves 6,000 persons.

## Ex. 5 Deliberative Process (DP)

The Dover Air Force Base is currently sampling approximately 20 homes in close proximity to an air crash. The ground water has 2800 ppb PFOS. We expect data back by the end of February. The Air Force has agreed to provide alternate water for homes at 0.15 ppb (.2) PFOS. The 4 wells for their PWS have been sampled and are non-detect for PFOS and PFOA.

If the value for PFOA is 100 ppt the wells impacted are all currently offline for PFOS. (5 wells)

If the value for PFOA is 0.1 ppb then one (1) additional well in Artesian's system will be impacted, which is currently online.

Maryland- None to date

Virginia- Fentress Naval facility 2 wells offline due to PFOS above 0.2 ppb, also have found PFOA above 100 ppt. Sampling is starting this week of about 40 private homes within a one-half mile radius of the facility.

Pennsylvania- 8 wells identified through the UCMR monitoring for PFOS above 0.2 ppb at Warminster, Warrington, Horsham and United Water PWS's. Wells off line and installing treatment.

- Four (4) additional wells found at the Harrisburg Airport found to have PFOS values above 0.2, wells taken off line while treatment is installed
- Air National Guard Station Willow Grove PWS found to have PFOS above 0.2 ppb, two wells serving 440 persons taken off and on bottled water while treatment is installed
- JL Larocca serving 50 persons taken off line for PFOS and hooked up to Horsham water
- 63 private wells taken off line and provided bottled water or in stages of being hooked up to public systems.

No additional PWS wells would come off line if the PFOA value is 100 ppt or 0.1 ppb, however at least one private home may be impacted at the 100 ppt value and possible more at the 0.1 ppb value.

If the PFOS value is lowered to 100 ppt there will be 3 additional PWS wells, or if 0.1 ppb there will be 4 additional PWS wells (total 7) impacted, and probably additional private wells. The current Emergency Orders for Warminster and the Air Guard have gathered data for all wells at 25 percent of the Provisional Health Advisory values for PFOS and PFOA.

West Virginia- We don't have any PWS wells impacted by PFOS, but we have several water systems with PFOA treatment due to the DuPont Emergency Orders issued in 2002 (150ppb), 2006 (0.50 ppb) and 2009 (0.40 ppb) PFOA have required sampling of public and private wells in a several mile radius in proximity to the Washington Works plant. The PFOA was air dispersed from the plant.

-If the PFOA value is 100 ppt, and additional 15 homes in Ohio and 5 homes in WV will require alternate water and treatment.

In addition, under UCMR sampling results, one entry point (4 wells) for Vienna Water system exceeds 100 ppt. If the value is expressed as 0.1 ppb there will be an additional 4 wells in Vienna (their entire water system serving 12,500 persons), and one entry point for the Parkersburg system, serving 34,250 persons will also be impacted.

In summary, we currently have 22 public water supply wells that have been turned off due to PFOS above the Provisional Health advisory none are above the current provisional value for PFOA, but some are above the 100 ppt. We are working with Federal facility partners under Emergency Orders and voluntary sampling programs to remedy the wells and provide alternate water to over 60 private homes at this time in Pennsylvania. We are expecting data in February and March from the sampling currently underway in both Delaware and Virginia and the values for PFOS and PFOA will significantly impact these and the DuPont Orders.